Executive Summary and Outlook

The Industrial Technologies Program (ITP) is actively working to address the enormous energy challenges now facing American industry. While all sectors of the U.S. economy are feeling the pinch of high energy prices, impacts on industry are especially acute. Reducing industrial energy intensity is also a quick, reliable solution for addressing national climate change and energy security issues.

> *"Industrial efficiency is important. Everything the U.S. can do to increase industrial energy efficiency or divert consumption and production from petroleum-based feedstocks helps enhance energy security."*
>
> *Samuel Bodman*
> *Secretary, U.S. Department of Energy*

ITP is the lead federal agency responsible for improving energy efficiency in the largest energy-using sector of the country. Together with our industry partners, we strive to:

- Accelerate adoption of the many energy-efficient technologies and practices available today
- Conduct vigorous technology innovation to radically improve future energy diversity, resource efficiency, and carbon mitigation
- Promote a corporate culture of energy efficiency and carbon management

ITP's successful partnership with industry has thrived for decades. Together we have developed hundreds of advanced technologies that have been commercialized and are saving energy *today*. We work closely with our partners to industry's top energy technology priorities. In addition to our traditional energy-intensive industry partners, we are reaching out to an even broader range of industries and service providers throughout the supply chain. We also collaborate with state energy offices, utilities, industry associations, the financial community, and other organizations with a stake in industrial energy efficiency to spur investment in new technology throughout this highly diverse sector.

Our partnership with industry is taking a giant leap forward in FY08 with the launch of a voluntary program to reduce energy intensity. ITP has established an ambitious goal to help lower the energy intensity of U.S. industry 25% by 2017 in accord with the *Energy Policy Act of 2005*. Industrial companies voluntarily pledge to meet this goal; ITP supports them by delivering resources to help boost their energy efficiency—whatever their current level of energy performance.

All indicators point to U.S. industry as a pivotal player in meeting national energy, environmental, and economic goals. While providing clear economic benefits, industry consumes more energy than any other single sector of the economy and is a major contributor to U.S. greenhouse gas emissions. Recent studies by both McKinsey and the International Energy Agency establish a strong role for industrial energy efficiency in cost-effectively reducing carbon emissions in the near term.

Industry: Critical to U.S. Energy Security and Economic Health

- Largest energy-consuming sector
- Highest contribution to U.S. GDP
- Responsible for >2/3 of U.S. exports
- 13 million direct jobs

Conducting energy efficiency R&D is a cornerstone of ITP's strategy. The Program develops and demonstrates cost-effective technology solutions to save energy and reduce carbon emissions in a broad manufacturing base. We also coordinate with other DOE programs – and other federal agencies—to turn scientific discoveries into next-generation solutions and promote distributed generation and fuel and feedstock flexibility. In defining our R&D investment strategy, we consider:

- Impacts on energy use throughout the manufacturing value chain
- Evolving business patterns and structural shifts
- Volatility in supply and price of fuels and feedstocks
- U.S. technological leadership in global markets
- Climate change mitigation